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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,628	09/27/2001	Xiong Liu	1834.130US1	2482

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EXAMINER
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NEGRON, DANIEL L

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 10/21/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/965,628

Applicant(s)

LIU ET AL.

Examiner

Daniell L. Negrón

Art Unit

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-29, 31-36, and 38-40 is/are rejected.
- 7) ☒ Claim(s) 30, 37 and 41 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 25-28, 31-35, 38, and 39 are rejected under 35 U.S.C. 102(e) as being anticipated by Cameron U.S. Patent No. 6,185,063.

Regarding claim 25, Cameron discloses a method for writing data to a plurality of adjacent tracks on a data storage surface of a data storage device comprising the steps of writing data to a first track of the adjacent tracks with a write member (column 2, lines 55-59).

The method disclosed by Cameron also comprises moving the write member in a first radial direction to a second track adjacent to the first track and writing to the second track such that the data written to the first is encroached only on one side by the data written to the second track (column 2, line 64 through column 3, line 9) (column 7, lines 47-61).

Regarding claim 26, Cameron discloses a method for writing data to a plurality of adjacent tracks on a data storage device comprising writing data to last track of the adjacent tracks wherein one of more intermediate tracks are interposed between the second track and the last track (see Fig. 7), the write member moving only in the first radial direction in traversing the plurality of tracks such that all data written to a track is encroached only on one side by data subsequently written to the respective track (column 7, lines 62-67).

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Regarding claim 27, Cameron discloses a method for writing data to a plurality of adjacent tracks on a data storage device wherein the write member defines an operable write width and the data storage device comprises a read member defining an operable read width (see Fig. 7), and wherein moving step comprises moving the write member a distance substantially equivalent to the read width between the tracks (column 8, lines 6-20). Cameron mentions that the invention disclosed allows the track density to be based on the width of the read head. It is inherent that in order to subsequently record data by encroaching as mentioned above, the write head is required to move a distance substantially equivalent to the read width in order to create tracks that are the substantially the size of the read head (see Fig. 7).

Regarding claim 28, Cameron discloses a method for writing data to a plurality of adjacent tracks on a data storage device comprising writing a sequential data record to a selected number of the plurality of adjacent tracks while moving the write member in the first radial direction between writing to adjacent tracks (column 8, lines 32-39).

Regarding claim 31, Cameron discloses a data storage device comprising a rotating disc assembly with a disc surface (see Figs. 3, 4, and 5, and elements 22 and 23) (column 6, lines 26-34).

Cameron also discloses a data storage device, which comprises a read transducer in operable transducing relationship to the disc surface defining a read width and a write transducer in operable transducing relationship to the disc surface defining a write width (column 5, lines 21-43).

Cameron also discloses a data storage device, which comprises a plurality of adjacent tracks on the disc surface disposed at a track-to-track spacing substantially equivalent to the read width (see Fig. 7) (column 8, lines 6-20).

Method claims 25-28 are drawn to the method of using the corresponding apparatus claimed in claims 32-35. Therefore method claims 25-28 correspond to apparatus claims 32-35 and are rejected for the same reasons of anticipation as described above.

Regarding claim 38, Cameron discloses a data storage device comprising a data storage disc in operable data reading and writing relationship with a write member and a read member (see Figs. 3, 4, and 5, and elements 22 and 23) (column 6, lines 26-34).

Cameron also discloses a data storage device wherein means for storing data on the disc by sequentially writing data on adjacent data storage tracks of the disc while moving the write member only in a first radial direction between adjacent tracks so that previously written data is encroached only on one side of the track by subsequently written data (column 2, lines 55-59).

Regarding claim 39, Cameron discloses a data storage device wherein the means for storing data is characterized by the write member defining an operable write width and the read member defining an operable read width (column 5, lines 21-43).

Cameron also discloses a data storage device wherein the write member moves a distance substantially equivalent to the read width between adjacent tracks (column 8, lines 6-20). Cameron mentions that the invention disclosed allows the track density to be based on the width of the read head. It is inherent that in order to subsequently record data by encroaching as mentioned above, the write head is required to move a distance substantially equivalent to the read width in order to create tracks that are the substantially the size of the read head (see Fig. 7).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 29, 36, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron U.S. Patent No. 6,185,063 in view of Lee et al U.S. Patent No. 6,108,156.

Regarding claim 29, Cameron discloses a method for writing data to a plurality of adjacent tracks on a data storage surface of a data storage device with all the limitations as disclosed above. Cameron however fails to mention defining a guard band adjacent to each of the first and last tracks of the plurality of adjacent tracks. Lee et al disclose a method in which guard bands are placed both on an outer and inner circumference of a rotating disc surface (see Figs. 2 and 5B). Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine the method of writing data taught by Cameron with the method for defining guard bands as taught by Lee et al in order to provide protection against reading adjacent tracks when head becomes off-track (column 7, lines 5-15).

Method claim 29 is drawn to the method of using the corresponding apparatus claimed in claim 36. Therefore method claim 29 corresponds to apparatus claim 36 and is rejected for the same reasons of obviousness as described above.

Claim 40 has limitations similar to those treated in the above rejections, and is met by the references as described above.

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*Allowable Subject Matter*


5. Claims 30, 37, and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is 703-305-6985. The examiner can normally be reached on Monday-Friday (8:30-6:00) Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on 703-308-4825. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-6743 for regular communications and 703-308-6743 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

DLN   
October 2, 2003

  
DAVID HUDSPETH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600